Syllabus
Department of Social Medical Insurance and Public Health
Working curriculum of the module "Fundamentals of project activity and evidence-based medicine"
Education programme 6B10115 "Medicine"

1.	**General information about the discipline**		
1.1	Discipline code OPDDM 2213	1.6	School year: 2023-2024
1.2	Title of discipline: "Fundamentals of project activity and evidence-based medicine"	1.7	Course: 2
1.3	Prerequisites: Introduction to Scientific Research	1.8	Semester: 3
1.4	Post-requisites: Fundamentals of Scientific Research	1.9	Number of credits (ECTS): 3
1.5	Cycle: BD	1.10	Component: UC

2.	**Description of the integrated discipline**
Integrated discipline: Project Method. Planning of scientific research. Preparatory stage of research work. Main sources of scientific information, their analysis and processing. Application of preventive, diagnostic and therapeutic interventions based on available evidence of their effectiveness and safety. Use of reliable scientific evidence of the effectiveness of drugs and medical manipulations. Rules of drafting and implementation in practice of clinical protocols of treatment and diagnosis based on evidence-based medicine.	

3.	**Form of summative evaluation**		
3.1	Testing +	3.5	Coursework
3.2	Written	3.6	Essay
3.3	Oral	3.7	Project
3.4	OSPE/OSCE or practical skills reception	3.8	Other (specify)

4.	**Objectives of the integrated discipline**
The purpose of mastering the discipline: formation of students' project competence, knowledge of project culture, basics of project activity and project management. To form the students' knowledge of the basics of evidence-based medicine, skills and abilities to critical thinking to develop their ability to independently search, analysis and evaluate medical information of any complexity, necessary in further practical activity	

5.	**Learning Outcomes (LOs of the discipline)**
CLO 1	Demonstrates a system of knowledge in the field of design activity, theoretical and practical knowledge of design activity, skills of preparation of design documentation.
CLO 2	Analyses the basic principles and methods of project management, strategic planning and operational management at different stages of project preparation.
CLO 3	Demonstrates knowledge and skills of project activities on the example of specific projects. Methods of identifying and accounting for project risks
CLO 4	Knows the basic terms and principles of evidence-based medicine in conducting sanitary-epidemiological activities; algorithm of information search in electronic databases of evidence-based medicine: Medline, PubMed, Cochrane Library.
CLO 5	Uses tools to search for evidence-based information when protecting the sanitary and epidemiological well-being of the population: the PICO principle (PIO, PICOT(T) when posing clinical questions; logical logical operators AND, OR, NOT; evidence filters in search engines, PubMed - MeSH database filter.

CLO 6	Can make a classification of epidemiological studies on the protection of public health and sanitary-epidemiological well-being of the population. Distinguish between types of analytical, descriptive, clinical studies. Distinguishes rules and requirements for the organization and conduct of control and experimental studies.	
CLO 7	Analyses the collected evidence on epidemiological well-being of the population in health care, works with statistical data from meta-analyses (Forest Raft method) and systematic reviews (SRs). Relates critically appraised new information to approved documents: standards of care, diagnostic and treatment protocols, clinical guidelines and recommendations.	
CLO 8	Applies the rules and principles of critical appraisal of clinical guidelines of the AGREE questionnaire. Formulates a problem, suggests ways of solving it based on valid data; Argues the significance of using evidence-based medicine databases to develop and improve knowledge, skills and abilities in clinical practice.	
5.1	module LO	EP learning outcomes to which the module LOs are linked
	CLO 1 CLO 5 CLO 7	CLO 1 Applies fundamental knowledge of biomedical, clinical, epidemiological and socio-behavioral sciences in practice
	CLO 3 CLO 4	CLO 3 Operates within the framework of RoK healthcare legislation to ensure quality healthcare services
	CLO 2 CLO 6	CLO 6 Provides admission, diagnosis, treatment, follow-up and rehabilitation of pediatric and adult patients, including pregnant women, based on the principles of evidence-based medicine.
	CLO 4 CLO 7 CLO 8	CLO 11 Analyses the results of research conducted and his/her professional activities based on scientific evidence

6.	**Detailed information on disciplines**					
6.1	Venue (building, auditorium): South Kazakhstan Medical Academy, 4th academic building, Department of Social Medical Insurance and Public Health. Al-Farabi Square - 3b, 2nd floor, auditorium № 1-9. Telephone (ATS) v/n 121, 122.					
6.2	Number of hours		Lectures	Prac. lesson	SIW	SIWT
		90	6	24	42	18
6.3	**Discipline study plan:**					

№	Week/day	Lecture	Classroom		SIWT	SIW	Name of the discipline
			Prac. lesson	CPN			
1	1- day	1	1		1	2	Project activities
			2		1	3	Evidence-based medicine
2	2- day		1		1	2	Project activities
		1	2		1	3	Evidence-based medicine
3	3- day		1		1	2	Project activities

		1	2		1	3	Evidence-based medicine
4	4- day	1	1		1	2	Project activities
			2		1	3	Evidence-based medicine
5	5- day		1		1	2	Project activities
		1	2		1	3	Evidence-based medicine
6	6- day		1		1	2	Project activities
		1	2		1	3	Evidence-based medicine
7	7- day		1		1	2	Project activities
			2		1	3	Evidence-based medicine
8	8- day		1		1	2	Project activities
			2		1	3	Evidence-based medicine

7. Information about teachers

№	Full name	Degrees and position	Email address	Research interests, etc.	Achievements
Department of Social Medical Insurance and Public Health					
1.	Tokkulieva Bakhyt Bolatovna	Candidate of Medical Sciences, Acting Associate Professor	bahita-jasmeir@mail.ru	Topical health issues.	Author of 1 textbook. Published 40 articles.
2.	Elena Viktorovna Pavlova	senior lecturer	lena601985@mail.ru	Topical health issues.	He is the author of more than 10 articles.
3.	Sultanbekov Kasymkhan Adilkhanovich	Candidate of Medical Sciences, Acting Associate Professor	SultanbekovK@mail.ru	Topical health issues.	He has published 40 articles.
4	Mizamov Dauren Mukhtaruly	Teacher, Master's degree	dauren903@mail.ru	Topical health issues.	He is the author of more than 10 articles.

8. Thematic plan

Day	**Subject title**	**Summary**	**module RO**	**Number of**	**Forms/ methods / learning**	**Forms/. evaluation methods**

				hours	technologies	
1.	**Lectures**					
	Project activities Notion of project activities, methods of their activity. Formulation of the topic, goals and objectives. Notion of hypothesis	The concept of the term project activity and its classification. Identification of the purpose of the project in cognition of the objective world by means of essential sides and interrelations of the phenomena of nature, society and thinking.	CLO 1	1	Introductory	Feedback questions
	Practical lesson					
	Project activity. Basic principles and tasks of project activity.	Analysing the set goal, mastery of skills in setting the project goal and objectives.	CLO 2	1	TBL. Case-study	Training cases
	Evidence-based medicine. Definition of evidence-based medicine. History of the development of evidence-based medicine. World experience of development.	Understand the term DM as "evidence-based medicine", "evidence-based medical practice", or "evidence-based medicine". The meaning of terminology used in evidence-based medicine, explain them. Name the tools of evidence-based medicine and the possibilities of their application in clinical practice.	CLO 4 CLO 5	2	TBL. Case-study	Training cases
	SIWT. SIW					
	Project Activities. The main stages of project activities.	Analysing the search for a problem and processing the information, evaluating the results and conclusions obtained.	CLO 2	1/2	Report, presentation, quizzes and tests	Evaluation criteria for independent work of students
	Evidence-based medicine. Evidence-based healthcare. Types of	Identification of priority areas for the development of the health care system; development of standards and formation	CLO 6 CLO 7	1/3	Report, presentation, quizzes and tests	Evaluation criteria for independent work of students

	questions formulated: diagnosis, treatment, aetiology and prognosis.	of programmes for the provision of medical care. The concept of diagnostics. The concept and types of treatment. The concept of etiology. The concept of a forecast.				
2	**Lecture**					
	Evidence-based medicine. Introduction to evidence-based medicine (EBM). Practical application in medicine.	Understand the term DM as "evidence-based medicine", "evidence-based medical practice", or "evidence-based medicine".	CLO 1		Overview	Questions for feedback
	Practical lesson					
	Project activity. Content of project activity.	The process of developing a detailed project and product description. The key benefit of this process is that it describes the boundaries of the product, service or outcome by determining which of the requirements collected will be included in the project content and which will be excluded.	CLO 1	1	Training cases, question and answer	Assessment interview using a checklist
	Evidence-based medicine. Terminology and tools of evidence-based medicine.	The meaning of terminology used in evidence-based medicine. Means of evidence-based medicine and the possibility of their application in clinical practice.	CLO 5	2	Training cases	Assessment interview using a checklist
	SIWT. SIW					
	Project activity. Criteria and requirements for	Clarity of **project** objectives; Relevance and demand for	CLO 3	1/2	Report, presentation,	Evaluation criteria for independent work of students

	choosing a project topic.	the **project**; Novelty and innovativeness of the **project**; Motivation and interest of the **project** participants; Social significance of the **project**; Practical significance and prospects of the **project**; Awareness (openness) of the **project**.			quizzes and tests	
	Evidence-based medicine. Quality of clinical information, its interpretation. The concept of problem drugs.	The system of authoritarian relations in medicine. Formation of medical "schools". Factors of reliability and validity of a controlled trial. Methods of randomisation. Problem medications.	CLO 6 CLO 8	1/3	Report, presentation, quizzes and tests	Evaluation criteria for independent work of students
3.	**Lecture**					
	Evidence-based medicine. Hierarchy of evidence. Pyramid of evidence. Levels of evidence (ABCD).	The hierarchy of trials is subdivided into 4 classes, indicated by Roman numerals (I, II, III, IV) or Latin letters (A, B, C, D). According to this categorisation, the quality (and consequently the evidence) of a clinical trial increases as the number of the category decreases.	CLO 8	1	Problematic	Questions for feedback
	Practical lesson					
	Project Activities. Methods of project management	Two methods of project management: Waterfall - the classic project management method, and Agile - agile project management. There is also such a thing	CLO 2	1	Training cases, case-study	Assessment interview using a checklist

		as methodologies, which is a ready-made algorithm for applying a method. These methods include Scrum, Kanban, Lean, Six Sigma, and so on.				
	Evidence-based medicine. Cochrane Library, MEDLINE, EMBASE. PubMed-search methodology, search tools.	The concept of bibliographic medical information retrieval system - Medline, advantages and disadvantages of the database. Searching for information on the Internet. Use of electronic databases in evidence-based medicine.	CLO 6	2	Training cases, TBL	Assessment interview using a checklist
	SIWT. SIW					
	Evidence-based medicine. Evidence-based medicine as a means of promoting medicines. Signs of incorrect advertising of medicines.	Definition of evidence-based medicine. The relationship between evidence-based medicine and drug promotion. The role of advertising to promote LS. Levels of evidence for medicines. Drug Interactions. Clinical and pharmacological guidelines in the treatment of various diseases.	CLO 6 CLO 8	2	Report, presentation, quizzes and tests	Evaluation criteria for independent work of students
4.	**Lecture**					
	Project Activities. Goal setting in projects. Methods of identifying and accounting for project risks, Project financing	Defining and setting goals, in any activity. Kaplan-Norton Balanced Scorecard (BSC) methodology	CLO 6	1	Problematic	Feedback questions
	Practical lesson					

	Project Activities. Project management	The five stages of the project management life cycle 1. Initiation 2. Planning 3. Fulfilment 4. Monitoring 5. Completion	CLO 2	1	Training cases, case-study	Feedback questions
	Evidence-based medicine. The five stages of evidence-based medicine. Problem formulation using the PICO principle.	The five stages of evidence-based medicine 1.Ask a question that can be answered 2.Find the best evidence 3.Critically evaluate the evidence 4.Consider the evidence from a clinical expertise perspective. 5.Assess whether the implementation of evidence-based technologies is feasible.	CLO 7	2	Training cases	Assessment interview using a checklist
	SIWT. SIW					
	Project Activities. Processes and functions of project management	Project Conceptualisation: Analysing the problem and the need for the project; Baseline data collection; Defining the goals and objectives of the project; Consideration of project alternatives.	CLO 1	1/2	Report, presentation, test preparation	Evaluation criteria for independent work of students
	Evidence-based medicine. Evidence-based prevention. Main types, problems of implementation and analysis of results of screening programmes.	The concept of evidence-based prevention. Types of screening programmes. Challenges in implementing the results of screening programmes. The concept of marketing in healthcare. Linking evidence-based medicine and marketing.	CLO 6	1/3	Presentation. Report.	Evaluation criteria for independent work of students

	Routine control 1/				**testing**	
5.	**Lecture**					
	Evidence-based medicine. Hierarchy of evidence. Pyramid of evidence. Levels of evidence (ABCD).	The hierarchy of trials is subdivided into 4 classes, indicated by Roman numerals (I, II, III, IV) or Latin letters (A, B, C, D). According to this categorisation, the quality (and consequently the evidence) of a clinical trial increases as the number of the category decreases.	CLO 8	1	Overview	Questions for feedback
	Practical lesson					
	Project Activities. Calendar planning and project organisation	The process of forming and approving the project calendar plan-schedule. The purpose of calendar planning is to create the most accurate project plan taking into account planned and forecasted deadlines of tasks (works), their durations, as well as to estimate possible labour costs by tasks.	CLO 3	1	Training cases, question and answer	Assessment interview using a checklist
	Evidence-based medicine. Search for information on the internet using DM filters. Fundamentals of statistical analysis of medical data.	Types of filters in DM. Logical operators AND, OR, NOT An algorithm for critical evaluation of the information received. Meaning of evidence. Levels of evidence. Why learn the basics of statistical analysis? What a doctor should know about statistical research.	CLO 6	2	Training cases, question and answer	Assessment interview using a checklist

	SIWT. SIW					
	Project activity. Innovation project as an object of project management	An innovation project should be considered as an object of project management. the life cycle of an innovation: - conceptual phase; - project planning phase and preparation for project implementation; - project execution phase; - Project Completion Phase; - operational phase.	CLO 4	1/2	Report, presentation, test preparation	Evaluation criteria for independent work of students
	Evidence-based medicine. Ethical aspects of conducting clinical research. Ethical committees.	Ethical considerations in the conduct of clinical research. Ethics committees. Information agreement.	CLO 7	1/3	Presentation. Abstract. Intellectual map	Evaluation criteria for independent work of students
6.	**Lecture**					
	Evidence-based **medicine** Medical electronic databases (EDBs) that fulfil the criteria for evidence-based **medicine.**	Randomised trial. Patients are allocated to treatment groups based on randomisation and all are equally likely to receive each of the drugs.	CLO 5	1	Overview	Questions for feedback
	Practical lesson					
	Project Activities. Project risk management	Types of risks in projects and the most common ones Time Risks; Budget Risks; Risks of changing workloads; External Risks; Single Point of Failure; Dependencies;	CLO 7	1	Training cases, TBL	Assessment interview using a checklist
	Evidence-based	Meta-analysis is a statistical synthesis of	CLO 7	2	Training cases,	Assessment interview using a checklist

	medicine. Meta-analysis of articles. Application of the Forest Raft method	data from different but similar, i.e. comparable, studies, which results in a quantitative assessment of the generalised results. In biomedical sciences, meta-analysis is a systematic, organised and structured assessment of the problem under study.			TBL	
	SIWT. SIW					
	Evidence-based medicine. Perspectives on the use of evidence-based medicine by physicians.	To give an idea of the established health care system in terms of defects. Name the main health problems of the citizens of the Republic of Kazakhstan.	CLO 7	2	Presentation. Report. Composition of test tasks	Evaluation criteria for independent work of students
7.	**Practical lesson**					
	Project activities. Sources and forms of project financing	The methods of financing investment projects may include: • self-financing; • corporatisation, as well as other forms of equity financing; • credit financing; • leasing; • budget funding; • blended finance based on various combinations; • project financing.	CLO 3	1	Training cases, case-study	Assessment interview using a checklist
	Evidence-based medicine. Sample planning and execution of a clinical trial centre audit. Error analyses. Advantages and disadvantages of clinical guidelines.	Quality assurance systems, audit aims and objectives, sample plan and phases of a clinical audit. Audit protocol and error analysis, impact of audit results on the evolution of quality performance.	CLO 7	2	Training cases	Assessment interview using a checklist

	SIWT. SIW					
	Project Activities. Methods of identifying and accounting for project risks	In practice, the following **methods of risk analysis are** the most popular: • statistical; • cost-benefit assessments; • of expert judgement; • Analytical; • method of using analogues; • assessment of financial stability and solvency; • analysing the consequences of risk accumulation; • combined method.	CLO 3	1/2	Report, presentation, test preparation	Evaluation criteria for independent work of students
	Evidence-based medicine. Centres of evidence-based medicine in our country and CIS.	Definition of evidence-based medicine. Development of DM in Kazakhstan. The notion of a society of DM professionals.	CLO 4	1/3	Presentation. Report. Composition of test tasks	Evaluation criteria for independent work of students
8.	**Practical lesson**					
	Project Activities. Project monitoring and control. Project results	The process of monitoring and controlling the project works includes: Comparison of current status by project work; Identification of areas requiring preventative action; Working with risk; Maintain an information base on the project; Provision of information for reporting Update project cost and schedule information; Working with changes approval and inclusion of additional actions in the project plan	CLO 2	1	Training cases, TBL	Assessment interview using a checklist

	Evidence-based medicine. Critical appraisal of the data obtained. Basics of statistical analysis of medical data.	An algorithm for critical evaluation of the information received. Meaning of evidence. Levels of evidence. Why learn the basics of statistical analysis? What a doctor should know about statistical research.	CLO 6	2	Training cases	Assessment interview using a checklist
	SIWT. SIW					
	Project Activities. Peculiarities of financing innovative projects.	Sources of financing for innovation projects Own financial resources of companies; Financial resources mobilised in the market; Financial resources available for redistribution	CLO 2	1/2	Report, presentation, test preparation	Evaluation criteria for independent work of students
	Evidence-based medicine. Scientific bases of planning and quality control in health care**.** **Routine control 2/**	The main functions of management; planning stages. the purpose of forecasting, modelling, programming.	CLO 7	1/3 2	Presentation. Report. **testing**	Evaluation criteria for independent work of students
Preparation and conduct of interim certification				*9 hours*		

9.	**Teaching methods and forms of control**	
9.1	Lectures	**Fundamentals of project work and evidence-based medicine** Introductory. Overview. Problematic. Thematic.
9.2	Practical lessons	**Fundamentals of project work and evidence-based medicine** Training cases, TBL, case-study, question and answer, Assessment interview using a checklist
9.3	SIWT. SIW	**Fundamentals of project work and evidence-based medicine** Report, presentation, test preparation, Evaluation criteria for independent work of students
9.4	Routine monitoring	testing
10.	**Evaluation criteria**	
10.1	**Criteria for assessing the learning outcomes of the discipline**	

NO.	**Learnin**	**Unsatisfacto**	**Satisfactory**	**All right.**	**That's great.**

RO	g Outcomes	ry			
CLO 1					
CLO 1	Demonstrates a system of knowledge in the field of design activity, theoretical and practical knowledge of design activity, skills of preparation of design documentation.	1.Does not possess knowledge about the concept of project activity, does not know the methodological basis of scientific knowledge. 2. Does not know the main types of theoretical and practical knowledge of project activities. 3. does not know the main features of theoretical and experimental research. 4. Does not have knowledge of skills in preparing project documentation.	1.Does not possess knowledge about the concept of project activity, does not know the methodological basis of scientific knowledge. 2. Knows the main types of theoretical and practical knowledge of project activities. 3.Knows the main features of theoretical and experimental research. 4.Possesses organised knowledge of skills in preparation of project documentation.	1. Competently and clearly possesses knowledge about the concept of project activity, does not know the methodological basis of scientific knowledge. 2.Competently and clearly distinguishes between theoretical and practical knowledge of project activities. 3.Distinguishes between the main features of theoretical and experimental research. 4.Demonstrates reasonably good knowledge of project documentation preparation skills	1.Demonstrates excellent knowledge of the concept of project activity, does not know the methodological basis of scientific knowledge. 2Analyses the topic and relates it to previous learning. 3.Consistently distinguishes the features of theoretical and experimental research without difficulty. 4.Demonstrates excellent knowledge of project documentation skills
CLO 2	Analyses the basic	1. Does not know the	1.Knows some principles of	1.Completes all practical	1.Fluent in the methods of summarising research results,

	principles and methods of project management, strategic planning and operational management at different stages of project preparation.	basic principles of project management. 2. Does not know basic project management techniques. 3 Does not understand the organisation of management strategic planning and operational management at different stages of their preparation	project management, but is not active, needs help from the teacher. 2. Knows the basic methods of project management. 3.Understands management organisation strategic planning and operational management at different stages of their preparation.	work independently, draws appropriate conclusions and takes an active part in discussing the results of the work and submits the completed reports. 2. Identifies basic project management techniques correctly and consistently without assistance. 3. Possesses knowledge in management organisations strategic planning and operational management at different stages of their preparation	requirements for preparing a scientific report, scientific article, report and presentation materials, draws appropriate conclusions and takes an active part in discussing the results of work. 2. Defines all project management principles, all project management methods independently and consistently without assistance. 3. Possesses excellent knowledge in management organisations strategic planning and operational management at different stages of their preparation
CLO 3	Demonstrates knowledge and skills of project activities on the example	1.Does not demonstrate knowledge and skills of project activities. 2.Is not oriented in searching	1.Able to search for new information when working with educational, general scientific and specialised	1.Applies knowledge of theoretical material in interpreting basic scientific research. Draws correct conclusions on	1.Demonstrates excellent knowledge in the search for new information when working with academic, general scientific and special literature, knows the main results of the latest research, Demonstrates original thinking when dealing with a situational problem, based on a deep

	of specific projects. Methods of identifying and accounting for project risks	for new information when working with educational, general scientific and specialised literature. 3.Cannot utilise the latest research published in leading professional journals 4.Cannot identify methods for analysing project risks	literature. 2.Finds it difficult to find new information when working with educational, general scientific and specialised literature. 3.Poorly orientated in the use of the latest research findings published in leading professional journals 4. Can identify methods for analysing project risks	the interpretation of indicator data proposed in situational tasks. 2. Competently, clearly orientated in the search for new information when working with educational, general scientific and specialised literature. 3.Effectively utilises the latest research published in leading professional journals 4. Able to identify methods of analysing project risks	understanding of the theoretical material. 2. Shows excellent knowledge of the required learning material in describing the search for new information when working with academic, general scientific and specialised literature. 3. makes effective use of the latest research published in leading professional journals, while exhibiting critical thinking. 4. effectively identifies methods for analysing project risks
CLO 4	Knows the basic terms and principles of evidence-based medicine; knows	1.Does not know the basic terms and principles of evidence-based medicine. 2.Does not realise searching for	1. Knows the definition of evidence-based medicine. 2. Can give a history of the development of evidence-	1.Possesses knowledge of DM terms and principles. 2.Able to work in the Medline database.	1.Applies the terminology and tools of evidence-based medicine. 2.Searches for information in electronic databases of evidence-based medicine. 3.Analyses the basic principles and methodology of DM. 4. Conducts systematic reviews and meta-analyses.

	the algorithm of information search in electronic databases of evidence-based medicine: Medline, PubMed, Cochrane Library.	information in electronic databases of evidence-based medicine. 3.Does not know the definition and experience of DM development.	based medicine. Can tell the world's experience of development.	3. Working in the PubMed database.	
CLO 5	Applies tools for searching for reliable information: PICO principle (PIO, PICOT (T)) when formulating a clinical question; Boolean logic operators AND, OR, NOT; filters of evidence	1. Does not know the first stage of evidence-based medicine. 2.Unable to formulate a clinical question. 3.Does not define the use of electronic databases in evidence-based medicine.	1.Can list the five stages of evidence-based medicine. 2.Can summarise the advantages and disadvantages of the database. 3. Lists methods for finding information on the Internet.	1.Able to work with Boolean logic operators AND, OR, NOT. 2.Demonstrates knowledge of evidence-based filters in search engines. 3. Applies knowledge of the bibliographic medical information retrieval system - Medline.	1.Analyses tools for finding reliable information. 2. Formulates problems using the PICO principle. 3. Works with PubMed database filters - MeSH. 4. evaluates the implementation of evidence-based technologies. 5. Works with Cochrane Library, MEDLINE and EMBASE.

	-based medicine in search engines, PubMed database filter - MeSH.				
CLO 6	Knows the classification of epidemiological studies. Distinguishes between types of analytical, descriptive, clinical studies. Knows the rules and requirements for organising and conducting observational and experimental studies.	1.Does not know the definition of clinical epidemiology history of development, basic principles and 2.Does not understand research methods. 3. does not recognise the quality of clinical information.	1.Outlines the classification of epidemiological studies. 2.Lists medical electronic databases that meet evidence-based criteria. 3. Conducts searches of databases.	1.Compares levels of confidence (ABCD). 2.Applies clinical research quality classification. 3. Reviews evidence in terms of clinical expertise and patient needs.	1.Analyses types of analytical, descriptive and clinical research. 2.Interprets observational and experimental studies. 3. defines a hierarchy of evidence. 4. analyses the pyramid of evidence.
CLO 7	Analyses collected information, works	1. Does not know the types of screening programmes.	1.Can sound out the statistics. 2.Lists the main 3. can articulate the fourth and	1. Reasoning over the basics of statistical analysis of medical data.	1.Analyses problems in implementing and analysing the results of screening programmes. 2.Interprets clinical trial designs.

	with statistical data from meta-analyses (Forest Raft method) and systematic reviews (SR). Relates critically evaluated new information to approved documents: standards of medical care, diagnostic and treatment protocols, clinical guidelines and recommendations.	2. Is not aware of the challenges of implementing the results of screening programmes. 3. unable to apply the findings in practice.	fifth stages of evidence-based medicine.	2. Conducts an algorithm to critically evaluate the information received. 3.Reflects on a critical evaluation of the data obtained. 4. Applies the Forest Raft method.	3.Analyses randomised controlled trials. 4. Searches for information on the internet using DM filters.
CLO 8	Applies the rules and principles of critical	1. Doesn't work with databa	1. Knows the methods for learning the basics of statistical analysis.	1. Carries out a critical appraisal of the data obtained. 2.Forms levels of evidence.	1. Applies findings in practice to improve the quality of health care services provided. 2.Analyses perspectives on the use of evidence-based medicine by physicians.

	appraisal of clinical guidelines of the AGREE questionnaire. Formulates a problem, suggests ways of solving it based on valid data; Argues the significance of using evidence-based medicine databases to develop and improve knowledge, skills and abilities in clinical practice.	ses. 2. Does not recognise the significance of databases. Does not critically appraise the data obtained.	2.Understands the significance of evidence. 3. Understands the role of ethics committees. 4. understands the concept of "information agreement".	3.Applies ethical considerations in the conduct of clinical research. 4. Develops and refines knowledge and skills.	3. Proposes his/her own ways of solving a problem based on valid data. 4. Interprets a statistical synthesis of data from different but similar, i.e. comparable, studies.

10.2	**Criteria for evaluating teaching methods and technology**
	Assessment criteria for evaluating the Practical lesson

Evaluation criteria	Level			
	That's great.	All right.	Oudov.	Unhappy.
	90 - 100	70-89	50-69	<50

Oral questioning	35-40	25-34	20-24	< 20
Knowledge of basic terms and definitions on the topic under consideration	10-10	7-9	7	<6
Knowledge of the methods, principles and function of scientific knowledge	10-10	7-10	7	<6
Knowledge of the main stages of scientific research, problem solving and factors affecting scientific research knowledge	10-10	7-10	4-6	<6
Referring to additional literature sources when answering, additional outline, analysing medical publications	5-10	4-5	2-4	0-2
Solving problems or completing assignments	**27-30**	**23-26**	**20-22**	**< 20**
Ability to analyse data	9-10	8-9	7-8	<7
Ability to work with regulatory documents	9-10	8-9	6-7	<6
Ability to draw conclusions	9-10	7-8	7-7	<7
Testing	**28 - 30**	**22-27**	**10 - 21**	**< 10**

Evaluation criteria for independent work of students

Shape controls	Evaluation	Evaluation criteria
Presentation of the topic	**That's great.** Relevant assessments: A (95-100%); A- (90-94%)	The presentation is made independently, on time, with the volume of at least 20 slides. At least 5 literature sources were used. The slides are informative and concise. At the defence the author demonstrates deep knowledge of the topic. Does not make mistakes when answering questions during the discussion.
	All right. Relevant assessments: B+ (85-89%); B (80-84%); B- (75-79%). C+ (70-74%);	The presentation is made independently, on time, with the volume of at least 20 slides. At least 4 literature sources were used. The slides are informative and concise. At the defence the author demonstrates good knowledge of the topic. Makes non-principled mistakes when answering questions, which he/she corrects himself/herself.
	Satisfy importantly Meets the grades: C (65-69%); C- (60-64%); D+ (50-54%)	The presentation is made independently, on time, with the volume of at least 20 slides. At least 3 literature sources are used. The slides are not informative. At the defence the author makes fundamental errors in answering questions.

	Unsatisfactory-sensibly Relevant to the assessment: FH (25-49%); F (0-24%).	The presentation is not delivered on the due date, the volume is less than 20 slides. Less than 2 literature sources are used. The slides are not informative. At the defence the author makes gross errors when answering questions. The author is not orientated in his own material.
Preparation and defence of the report	**That's great** Meets the grades: A (95-100%); A- (90-94%)	The report is neatly done and submitted by the due date, written independently on at least 15 pages of typewritten text, using at least 5 literature sources. Schemes, tables and figures corresponding to the topic of the abstract are given. When defending the report, the text is not read, but narrated. Confidently and unmistakably answers all the questions asked.
	All right. Meets the grades: B+ (85-89%); B (80-84%); B- (75-79%); C+ (70-74%);	The report is neatly done and submitted by the due date, written independently on at least 10 pages of typewritten text, using at least 4 literature sources. Schemes, tables and figures corresponding to the topic of the abstract are given. When defending the report, the text is not read, but narrated. Makes non-principled mistakes when answering questions.
	Satisfactory Meets the grades: C (65-69%); C- (60-64%); D+ (50-54%); D- (50-54%).	The report is neatly done and submitted by the due date, written independently on at least 8 pages of typewritten text, using at least 3 literature sources. When defending the report, the text is read. Does not answer questions confidently, makes fundamental mistakes.
	Unsatisfactory-sensibly Relevant to the assessment: FH (25-49%); F (0-24%).	The presentation is not delivered on the due date, the volume is less than 20 slides. Less than 2 literature sources are used. The slides are not informative. At the defence the author makes gross errors when answering questions. The author is not orientated in his own material.
Compilation of test questions	**That's great** Meets the grades: A (95-100%); A- (90-94%).	Test assignments contain at least 20 questions. Handed in by the due date. The basis of the test is substantial. Test tasks are formulated clearly, correctly, specifically. The answer options are uniform and adequate. There is an algorithm of answers. Correct answers are correctly marked.
	All right. Meets the grades: B+ (85-89%); B (80-84%); B- (75-79%); C+ (70-74%).	Test assignments contain at least 18 questions. Handed in by the due date. The basis of the test is substantial. Test tasks are formulated clearly, correctly, specifically. There are no variants of answers. There is an algorithm of answers. Correct answers are correctly marked.

	Satisfactory Meets the grades: C (65-69%); C- (60-64%); D+ (50-54%).	Test assignments contain at least 15 questions. Handed in by the due date. The basis of the test is incomplete. There are test tasks formulated vaguely, incorrectly, unspecifically. There are non-uniform answer options. There is an algorithm of answers. Not all correct answers are marked correctly.
	Unsatisfactory Corresponds to the assessment FX (25-49%); F (0-24%).	Test tasks contain at least 10 questions. Non-content basis of the text, unclear question formulation. Inconsistent answer options. No algorithm of answers is available. More than 50% of correct answers are incorrectly marked.
Routine control/. Oral, solving situation al problems	**That's great** Meets the grades: A (95-100%); A- (90-94%).	90-100% of correct answers to the ticket. Situational tasks are solved by the student correctly, logically argued answers.
	All right. Meets the grades: B+ (85-89%); B (80-84%); B- (75-79%); C+ (70-74%).	70-89% of correct answers to the ticket. Situational tasks are solved by the learner correctly, arguments are weak.
	Satisfactory Meets the grades: C (65-69%); C- (60-64%); D+ (50-54%).	50-69% of correct answers to the ticket. Situational tasks are solved by the learner with errors, reasoning is absent.
	Unsatisfactory Corresponds to the assessment FX (25-49%); F (0-24%).	Less than 50% of correct answers to the ticket. Situational tasks are not solved correctly by the learner.

Intermediate certification

Multi-point system of knowledge assessment

Letter grade	Digital equivalent of points	Percentage content	Evaluation under the traditional system
A	4,0	95-100	That's great
A -	3,67	90-94	
B +	3,33	85-89	All right.
B	3,0	80-84	
B -	2,67	75-79	
C +	2,33	70-74	

C	2,0	65-69	Satisfactory
C -	1,67	60-64	
D+	1,33	55-59	
D-	1,0	50-54	
FX	0,5	25-49	Not satisfactory
F	0	0-24	

11. Learning Resources	
Electronic resources	Clinical pharmacology [Electronic resource] : textbook / edited by V. G. Kukes, A. K. Starodubtsev. G. Kukes, A. K. Starodubtsev. - 3rd ed., rev. and supplement. - Electronic text dan. (41.8 Mb). - M. : Izd. group "GEOTAR-Media", 2012. - Grinhalkh, T. Dəleldi medina negizderi [Electronic resource] : okulyk / kazak til. aud. T. K. Sagadatova. - Electronic text data. (40,4MB). - Moscow : GEOTAR - Media, 2017. - e-opt. Evidence-based medicine in questions and answers. Derbisalina G.A., Akhmetova D.N., Bekbergenova J.B., 2020/https://aknurpress.kz/login Dəleldi medicine negizderi.***Sərsenbayeva G.Zh. ,*** ***2019/https://aknurpress.kz/login*** Dəleldi medicine negizderi boyynsha akparatty-didacticalyқ zhinaq.Kalieva Sh.S., Sagadatova T.K. , ***2019/https://aknurpress.kz/login*** Dəleldi medicine negizderi.Derbisalina G.Ə. , ***2019/https://aknurpress.kz/login*** Kalieva, Sh. S. Kalieva, T. K. Sagadatova, Sh. S. Kalieva, K. K. Sagadatova; Densaulyk Saktau MP, Karaganda Medical University. - 2-bas. - Karaganda : Aknur baspasy, 2019. - 180 b. http://elib.kaznu.kz/ Raushanova, Aizhan Muratovna Fundamentals of evidence-based medicine [Text] : textbook / A. M. Raushanova; Al-Farabi KazNU. - Almaty : Kazak Un-ti, 2019. - 112 c. . http://elib.kaznu.kz/ П. Kalieva Sh.S., Yukhnevich-Nasonova E.A. S.T. Tuleutaeva Dəлeldi medicine negizderi. - Kaltaly anyktama. - Almaty. "Evero" baspasy, 2020. - 100 bet. https://www.elib.kz/ru/search/read_book/837/
E-textbooks	Clinical pharmacology [Electronic resource] : textbook / edited by V. G. Kukes, A. K. Starodubtsev. G. Kukes, A. K. Starodubtsev. - 3rd ed., rev. and supplement. - Electronic text dan. (41.8 Mb). - Moscow : Izd. group "GEOTAR-Media", 2012. - 840 c. Grinhalkh, T. Dəleldi medina negizderi [Electronic resource] : okulyk / kazak til. aud. T. K. Sagadatova. - Electronic text data. (40,4MB). - Moscow : GEOTAR - Media, 2017. - e-opt.
Journals (electronic journals)	-

Literature	Basic Sarsenbaeva G. J. Dəleldi medicine : oқu kuraly / G. J. Sarsenbaeva. - 2-shi bass. - Karaganda : KHҰR, 2019. - 190 bet. s Sarsenbaeva G. J. Dəleldi medicine : oқu kuraly / G. J. Sarsenbaeva. - Karagandy : A KҰR, 2016. - 190 bet. p. Evidence - Based Medicine how to practice and teach [Text] : textbook / S. E. E. Straus and others. - 4 th ed. - Edinburgh : Elsevier, 2019. - 324 p. Translation of title: Evidence-Based Medicine. How to practice and teach Kalieva**, Sh. S.** Information and didactic block on the basics of evidence-based medicine [Text] : textbook / Sh. S. Kalieva, N. A. Minakova. - 2nd ed. - Karaganda : AҚHҰP, 2019. - 190 c Derbisalina G.A. Daleldi medicine withuraktary men zhauaptary.-Ak-Nur, 2014 Grinhalkh, T. Dəleldi medicine negizderi : oқulyk: audarma agylshenn tilinen / jauapty ed. G. S. Kemelova ; qazak tiline aud. T. K. Sagadatova. - Moscow : GEOTAR-Media, 2014. - 336 bet Petrov, V. I. Evidence-based medicine [Text] : textbook / V. I. Petrov, S. V. Nedogoda. - ; Rek. Educational-methodical association for medical and pharmaceutical education of Russian universities. - Moscow : GEOTAR-Media, 2012. - 144 c. Additional. Kalieva Sh. C. Medical science in the field of medicine : akparaty-didacticalikal'k zhinaq : aku kuraly / Sh. S. Kalieva, T. K. Sagadatova ; KP denzaulyk saktau ministeriligi; KMMU. - 2-shi bass. - Karagandy : ZhK "Aknur", 2019. - 182 bet. s Evidence-based medicine in questions and answers : teaching manual / G. A. Derbisalina [et al.]. - Karaganda: ZhK "Ak Nur", 2013 Derbisalina G. Ə. Dəлeldi medica negizderi : ədistemelik nұcқay . - 2-bas., tolykt. - Karaganda: "Ak Nur", 2013

12. Discipline Policy

Student requirements, attendance, behaviour, grading policy, penalties, incentives, etc.

1. Active participation in the learning process.
2. In case of inactivity and failure to complete the task, penalties will be imposed and the practical lesson grade will be reduced.
3. Have an idea of the topic of the upcoming lecture, be prepared for feedback in the lecture.
4. Be able to work as part of a team.
5. Active participation of students in research work and in the activities of the department to improve the educational and methodological process.
6. Observe safety procedures in the classroom.
7. Passing the boundary control at the prescribed time.
8. Routine control of students' knowledge is carried out at least twice during one academic period on the 6/11 day of theoretical training with the resolution of the results of end-of-term control in the academic logbook and electronic logbook, taking into account penalty points. The student who did not attend the final control without a valid reason is not allowed to take the exam on the discipline. The results of the final control are submitted to the dean's office in the form of a report before the end of the control day.

9. All written work is checked for plagiarism.
10. From the proposed SIW tasks, the student chooses one of the forms.
11. The rating of admission to the exam is made up of the average score of practical classes, SIW, and end-of-term control.

Example of calculation of admission rating: SIW (admission rating) = 80 +90 + 95 + 95= 87 (80 - average grade for practical classes; 90 - average grade of the boundary control; 95 - average grade of the SIW).

12. A student who has not obtained a passing score (50%) on one of the types of control (current control, end-of-term control №1 and/or №2) is not allowed to take the examination in the discipline.

13.	**Academic policies based on the moral and ethical values of the academy**
	Academic Policies. P. 4 Student Honour Code. https://base.ukqfa.kz/?page_id=251
	Discipline Grading Policy.

14. Approval and revision			
Date of approval by the department	Minutes No. 14 of 06 2023	Head of Department Sarsenbaeva G.Zh.	Caption
Date of approval by the PMC	Minutes No. 11 05.06. 2023	Chairperson of the PMC Sadykova A.Sh.	Caption